

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P309332

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA125-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P309332
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2810.0 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

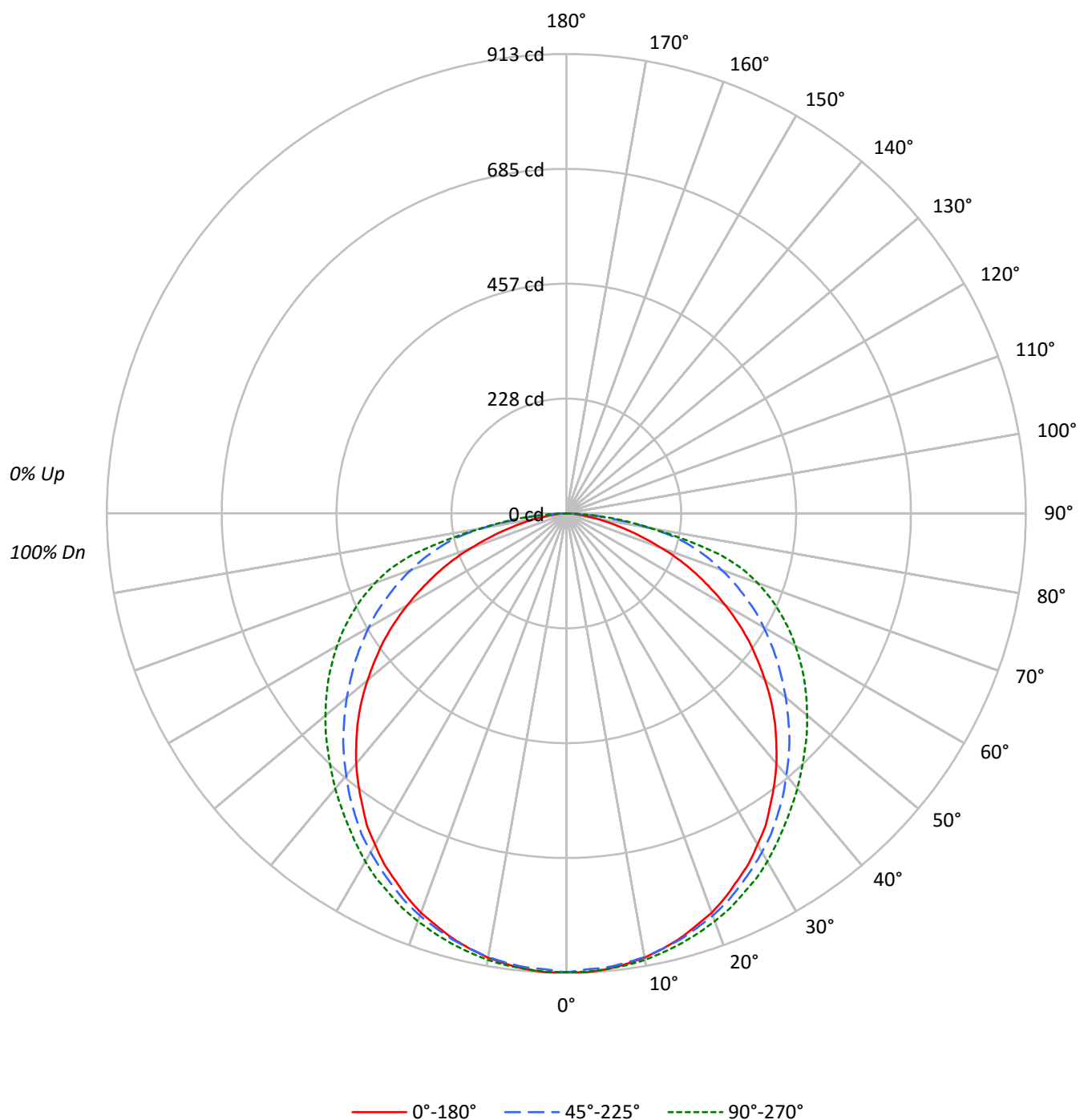
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1227	1227	1227
5°	1228	1223	1228
10°	1225	1223	1231
15°	1218	1221	1232
20°	1209	1218	1235
25°	1195	1212	1237
30°	1181	1208	1241
35°	1161	1202	1242
40°	1141	1194	1254
45°	1115	1193	1274
50°	1079	1192	1308
55°	1040	1200	1355
60°	981	1219	1415
65°	906	1247	1494
70°	792	1291	1592
75°	642	1358	1645
80°	474	1331	1331
85°	363	980	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	3.1
10°-20°	248.0	8.8
20°-30°	377.6	13.4
30°-40°	458.5	16.3
40°-50°	484.4	17.2
50°-60°	457.0	16.3
60°-70°	380.0	13.5
70°-80°	250.0	8.9
80°-90°	68.2	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	712.0	25.3
0°-40°	1170.4	41.7
0°-60°	2111.8	75.2
0°-90°	2810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2810.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	909	909	906	909	909	86
15°	874	875	876	885	885	247
25°	805	809	816	830	833	371
35°	707	715	732	750	756	443
45°	586	598	627	658	669	451
55°	444	462	512	560	578	395
65°	285	318	392	449	469	281
75°	124	180	261	309	316	133
85°	24	52	64	71	72	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	911.7	911.7	911.7	911.7	911.7
2.5°	912.9	911.7	907.0	911.7	911.7
5°	909.4	909.4	905.8	909.4	909.4
7.5°	903.5	903.5	901.1	905.8	905.8
10°	896.4	896.4	895.2	901.1	901.1
12.5°	885.8	887.0	885.8	892.9	892.9
15°	874.1	875.2	876.4	884.6	884.6
17.5°	858.8	861.1	863.5	872.9	874.1
20°	844.7	845.8	850.5	861.1	862.3
22.5°	825.8	829.4	835.2	845.8	849.4
25°	804.7	809.4	816.4	830.5	832.9
27.5°	784.7	788.2	797.6	812.9	817.6
30°	760.0	765.8	777.6	792.9	798.8
32.5°	736.4	742.3	756.4	772.9	777.6
35°	707.0	715.2	731.7	750.5	756.4
37.5°	678.8	687.0	707.0	728.2	735.2
40°	649.4	658.8	680.0	704.7	714.1
42.5°	617.6	630.5	654.1	681.1	691.7
45°	585.8	597.6	627.0	657.6	669.4
47.5°	551.7	565.8	597.6	634.1	648.2
50°	515.3	532.9	569.4	609.4	624.7
52.5°	478.8	498.8	540.0	584.7	601.1
55°	443.5	462.3	511.7	560.0	577.6
57.5°	404.7	428.2	482.3	534.1	551.7
60°	364.7	390.6	452.9	507.0	525.8
62.5°	324.7	354.1	424.7	478.8	498.8
65°	284.7	317.6	391.7	449.4	469.4
67.5°	245.9	282.3	361.2	418.8	438.8
70°	201.2	247.0	328.2	384.7	404.7
72.5°	160.0	212.9	296.5	349.4	367.0
75°	123.5	180.0	261.2	309.4	316.5
77.5°	90.6	147.0	224.7	241.2	242.3
80°	61.2	117.6	171.8	169.4	171.8
82.5°	40.0	88.2	108.2	121.2	122.3
85°	23.5	51.8	63.5	70.6	71.8
87.5°	11.8	17.6	22.4	23.5	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)